DOCUMENT RESUME

ED 084 444 CE 000 664

AUTHOR	Callen, John; And Others
TITLE	Sheridan County Health Manpower and Education Profile.
INSTITUTION	Mountain States Regional Medical Program.
SPONS AGENCY	Health Services and Mental Health Administration (DHEW), Bethesda, Md. Regional Medical Programs Service.
PUB DATE	72
NOTE	49p.; For related documents, see CE 000 658 through 663
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Census Figures; Health Facilities; *Health Occupations Education; *Health Personnel; Occupational Information; *Occupational Surveys; Population Distribution
IDENTIFIERS	*Mountain States Health Manpower and Education

ABSTRACT

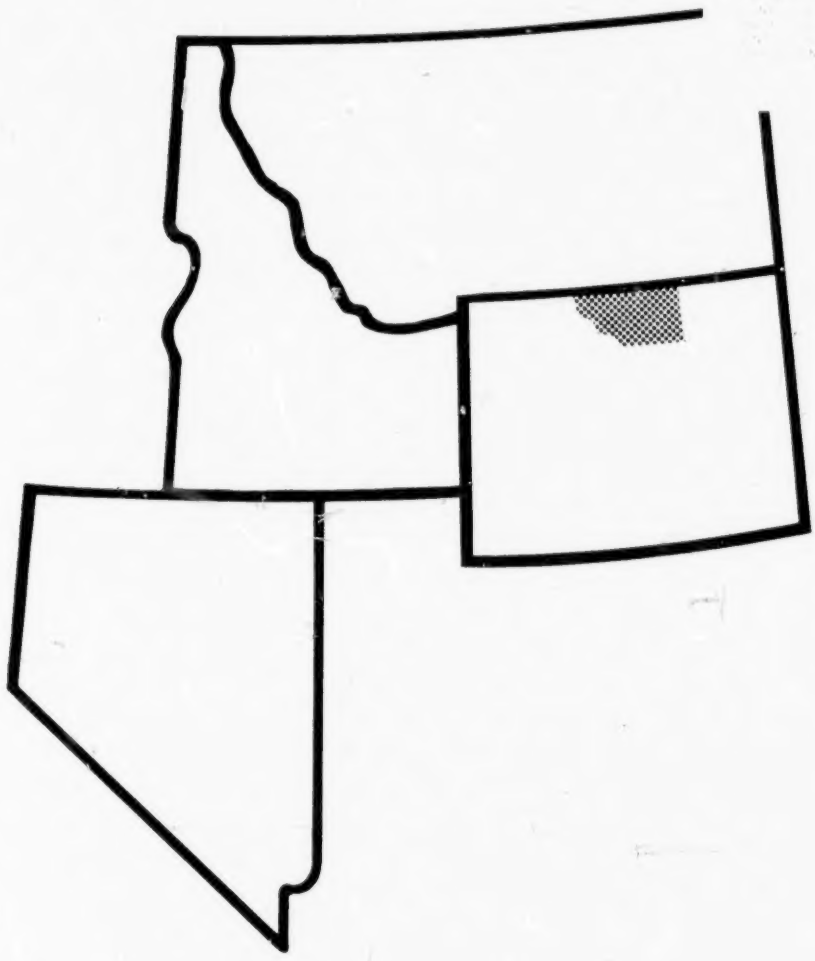
The profile is a concise description of the demographic and economic characteristics, existing health manpower employed, and health education programs for the Sheridan County area of Wyoming, one of seven surveyed in the Mountain States region (Idaho, Montana, Wyoming, and Nevada). The first section of the profile provides general population information, income distributions, and occupational groups of employed persons in the area surveyed. The second section lists the number of people employed in 103 categories of health occupations. The third section lists health education institutions which offer degree or certificate programs in the health field. It includes information about libraries in health related fields and the availability of video-tape equipment. The fourth section is an enumeration of health facilities in the area surveyed. Comparisons are made within the four States and to the United States in toto. Other regions covered are: Carson-Washoe County (CE 000 658), Treasure Valley (CE 000 659), Albany-Laramie Counties (CE 000 660), Yellowstone County (CE 000 661), Missoula County (CE 000 662), and Clark County (CE 000 663). (AG)

FILMED FROM BEST AVAILABLE COPY

ED 084444

SHERIDAN COUNTY HEALTH MANPOWER AND EDUCATION PROFILE

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION



CE 000664

A Publication of the
MOUNTAIN STATES REGIONAL MEDICAL PROGRAM

FILMED FROM BEST AVAILABLE COPY

1972 EDITION

This publication was prepared by the Mountain States Regional Medical Program, one of 56 programs in the nation supported by the Regional Medical Program Service, a division of Health Services and Mental Health Administration of the U. S. Department of Health, Education and Welfare. The Mountain States Regional Medical Program encompasses Idaho, Montana, Nevada and Wyoming. The Western Interstate Commission for Higher Education (WICHE) serves as the grantee agency for the Mountain States Regional Medical Program.

100% RECYCLED PAPER

ED 084444

A PUBLICATION OF THE MOUNTAIN STATES REGIONAL MEDICAL PROGRAM

SHERIDAN

HEALTH MANPOWER AND EDUCATION PROFILE

John Callen
Don Erickson
C. E. Smith

TABLE OF CONTENTS

PAGE

PREFACE

INTRODUCTION

SECTION I: POPULATION CHARACTERISTICS 1

A. INTRODUCTION 1
B. NARRATIVE SUMMARY 1
C. DEMOGRAPHIC CHARACTERISTICS: STATISTICAL SUMMARY 3
D. ECONOMIC CHARACTERISTICS: STATISTICAL SUMMARY 6
E. OCCUPATIONAL CHARACTERISTICS: STATISTICAL SUMMARY 8

SECTION II: HEALTH MANPOWER 10

A. INTRODUCTION 10
B. NARRATIVE SUMMARY 10
C. HEALTH MANPOWER: STATISTICAL SUMMARY 12

SECTION III: EDUCATION OF HEALTH MANPOWER 19

A. INTRODUCTION 19
B. EDUCATION OF HEALTH MANPOWER: ORIGINAL EDUCATION PROGRAMS 21
C. HEALTH EDUCATION PROGRAMS: ORIGINAL EDUCATION OUTSIDE AREA AND IN-STATE 22
D. HEALTH EDUCATION RESOURCES 23
E. HEALTH EDUCATION PROGRAMS: CONTINUING EDUCATION IN AREA 24

SECTION IV: HEALTH FACILITIES 25

A. INTRODUCTION 25
B. NARRATIVE SUMMARY 25
C. HEALTH FACILITIES: DATA SUMMARY 26

APPENDICES

1. MS/RMP WORKING DEFINITIONS OF HEALTH OCCUPATIONS 29
2. PRIMARY DATA SOURCES 36
3. SECONDARY DATA SOURCES 38

PREFACE

The sparse population and the scattered population centers of the western states provide a unique set of problems in meeting the health needs of the people within this area. Further, three of the four states served by the Mountain States Regional Medical Program, Idaho, Montana, and Wyoming, do not have medical schools. The fourth state, Nevada, served by the Region has a two-year medical school.

During the summer of 1972, Mountain States RMP directed a concentrated effort toward describing in detail the numbers of health workers in seven co-munity areas in the Region. Additionally, the numbers and kinds of health education occurring in the community were described, and a summary of economic and demographic characteristics of the areas was compiled. This firsthand, current assessment is necessary to plan effectively for programs which aim to increase needed health manpower supply and skill relevance at the community level. Numerous organizations, including the Mountain States Regional Medical Program in its "Health Training Network" activities, are currently approaching this complex problem. Essentially then, the profile is a concise description of the demographic and economic characteristics, existing health manpower employed, and health education programs for each of the seven community areas surveyed in the Mountain States region.

However, the information contained in this profile provides only the "what is" with regard to health manpower and education in the community area. To be used as an effective planning tool, the profile should be accompanied with statements of what "ought to be" with regard to the

distribution, supply, and skill relevance of the health manpower pool necessary to best serve the community area. Comparisons of the "real" and the "desirable" can provide a basis for planning increasingly relevant health education programs. This profile is intended, therefore, to be used by local groups concerned with health planning, by the Mountain States RMP, by educational institutions and state boards of education, by consumers, by health professionals and by other health organizations.

The compilation of the data presented has depended upon the assistance and energies of many persons too numerous to list; however, special acknowledgement is due to Larry Bertilson, Wyoming Comprehensive Health Planning Services, and Alice Lane, Wyoming State Library; and to Mrs. June Geiger, Mrs. Martha Nichols and Mrs. Myrna Ferguson for their assistance in the preparation of this profile. Additional acknowledgement is due to the many persons who provided basic information for the profile; they are listed in Appendix 2.

John W. Gerdes, Ph.D.
Regional Director

Claude O. Grizzle, M.D.
Director, Wyoming Division

C. E. Smith, Ph.D.
Director, Health Training Networks

August 1972

INTRODUCTION

The data contained here are divided into four basic parts. First is the demographic data for the area with general population information, income distributions, and occupational groups of employed persons in the area surveyed. This information was obtained from the U.S. Bureau of the Census publications for the 1960 and the 1970 census.

In the second part, the number of persons working in health professions was tallied by the setting in which they are employed. Insomuch as there are some 103 categories of occupations of health workers listed, a set of brief occupational descriptions is given in the appendices to indicate what kinds of employment were included in a given category. Further, a listing of the specific institutions in which health personnel were surveyed is included; in this way, any discrepancies may be readily detected. The exception is private offices, the list of which is too lengthy to include. Importantly, only those health personnel who were employed were enumerated; thus, if a person is a medical technologist, for example, that person was counted only if he or she was currently practicing in the area. In this way a clear picture of the health manpower actually serving the area may be realized. In all cases, part-time employees counted as one-half; therefore, some numbers may have a "0.5" attached which accounts for part-time employees.

Every attempt has been made to insure the accuracy of the data presented; it is conceivable, however, that some persons may not have been counted or that the information that we obtained was in error by passage of time or inaccurate records. Further, we attempted to gather as much information as possible by direct contact with the various work settings rather than through secondary sources. Thus, all data not directly annotated may be assumed to be primary data obtained by interview, telephone contact, questionnaire, etc. In a very few cases, an accurate count simply was not available within budget and time constraints. In these cases the quantity is clearly marked by an asterisk and noted to be an estimate, or was omitted.

The third section is a quantification and listing of the various health education resources and institutions within the area. This section lists the institutions which offer course work leading to a certificate or degree preparing graduates to practice in the health field. This section also contains information about libraries in health related fields and video-tape equipment available to health education and practicing personnel.

The fourth and final section is an enumeration of health facilities such as a number of hospitals, ambulances, pharmacies, and other facilities in the area surveyed.

The general order of presentation of any given set of data is one in which a brief introduction to the section is given describing the specific limitations and features of the data in that section; and a

brief narrative description of the data is given in order to highlight the unusual quantities obtained in the survey. Secondly, a graphic comparison is made with the local quantities of the four state area of Idaho, Montana, Nevada, and Wyoming (Mountain States Region) and to the United States in toto, where such a visual demonstration of the information is deemed useful. Finally, the raw data for the given category is provided for those readers who wish a more detailed description.

Detailed information about procedures and raw data are available upon item-specific request made to:

Mountain States Regional Medical Program
Wyoming Division
3100 Henderson Drive
Cheyenne, Wyoming 82001

SECTION I: POPULATION CHARACTERISTICS

A. INTRODUCTION

This section provides a statistical description of the general demographic characteristics including totals, densities, rural-urban distributions, and age distributions; the economic characteristics of the area in terms of the per capita and family median incomes; and the occupational characteristics of the area in terms of the numbers of persons employed in various selected occupational groups.

Included here are comparison graphs indicating how the Sheridan County area compares with the Mountain States Region and the United States for given selected statistics from this section.

B. NARRATIVE SUMMARY

1. POPULATION DENSITY:

The comparison data for the number of persons per square mile in Sheridan County indicates that the population density is well below the National figure of some 57 persons. This low density is in keeping with the general low population density of the Mountain States Region. Importantly, note that the vertical axis of the graph exhibits a scale change in order to include the extremely high and extremely low numbers. (see Figure 1)

2. GROWTH RATE:

The growth rate of Sheridan County has, over the last ten years, been in the negative direction. The percentage point difference between Sheridan and the United States rate is 19.3%. (see Figure 2)

3. AGE DISTRIBUTION:

There seems to be no significant difference in the concentrations of any of the various age groups of persons from Sheridan County to the Mountain States Region or to the United States.

4. FAMILY MEDIAN INCOME:

Sheridan County exhibits a lower per capita income and a lower family median income than do the Mountain States or the United States as a whole. The differences here are not as apparent as they might be from a glance at the graphic display. Numerically, the difference is approximately one-fourth to one-third less than the National figures. (see Figure 3)

5. OCCUPATIONAL CHARACTERISTICS:

This graph indicates the relative concentration of health workers in general. The indication here is that Sheridan County exhibits a higher concentration than does the United States in general, and a much higher ratio than the Mountain States Region. The concentration increase rate seems comparable to the United States data. (see Figure 4)

C. DEMOGRAPHIC CHARACTERISTICS: STATISTICAL SUMMARY

Area Surveyed Sheridan County

Population: 1960 18,989[1] *1970* 17,852[2] *Per Cent Change* -6%

Geographic Area: 2,532 *Square Miles*[2]

Population Density: 7.1 *Pers/Sq. Mil*[2]

**Rural Population: 1960* 7,338[1] *1970* 6,996[2]

Urban Population: 1960 11,651[1] *1970* 10,856[2]

Age Distribution (1970):[3]

0-4	1,095	*45-49*	1,170
5-9	1,446	*50-54*	1,198
10-14	1,796	*55-59*	1,135
15-19	1,735	*60-64*	961
20-24	900	*65-69*	773
25-29	819	*70-74*	780
30-34	812	*75-79*	637
35-39	873	*80-84*	400
40-44	1,075	*85+*	247

---

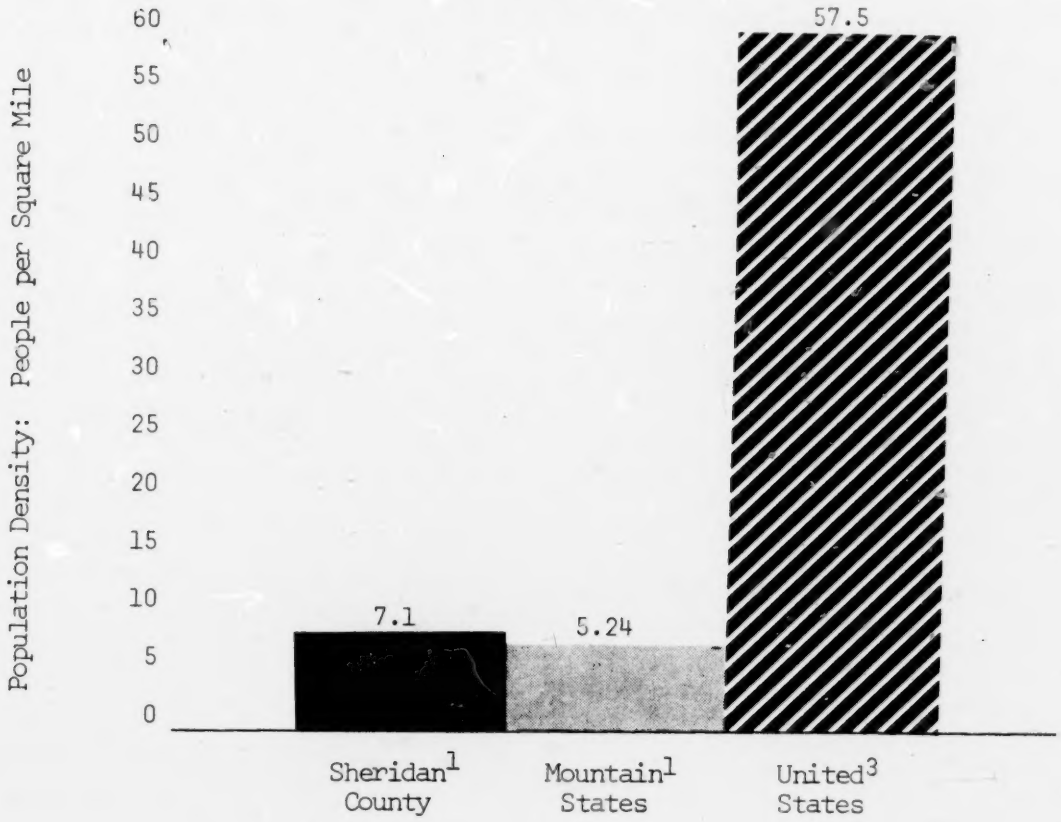
* Rural Population: 2500 or Less
Urban Population: 2501 or Over

1 U.S. Bureau of Census. U.S.Census of Population: 1960. Number of Inhabitants, Wyoming. Final Report PC (1)-52A. U.S. Government Printing Office, Washington, D.C., 1960. p. 10.

2 U.S. Bureau of Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1)-52A Wyoming. U.S. Government Printing Office, Washington, D.C., 1970. p. 13.

3 U.S. Bureau of Census. U.S. Census of Population: 1970. General Population Characteristics. Final Report PC (1)-52B Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. p. 56.

FIGURE 1: Population Density



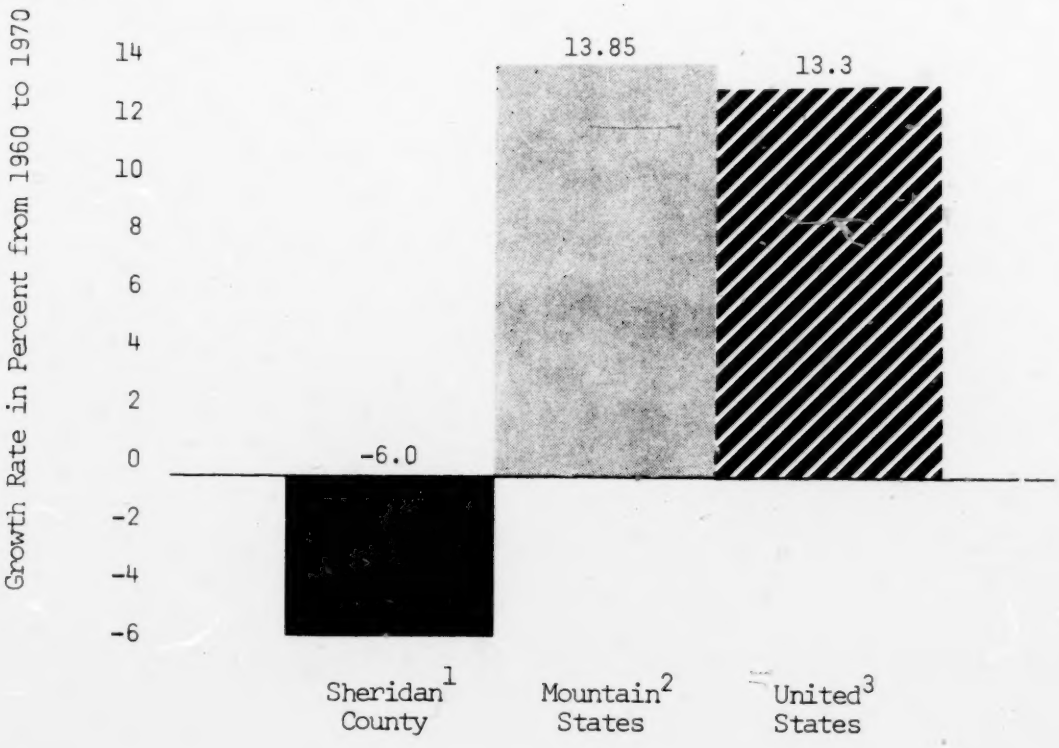
---

[1] U.S. Bureau of Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1)-52A Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. p. 13.

[2] U.S. Bureau of Census. U.S. Census of Population: 1970. Number of Inhabitants, (Combined data from Idaho, Montana, Nevada and Wyoming). U.S. Government Printing Office, Washington, D.C., 1971.

[3] U.S. Bureau of Census. Statistical Abstract of the United States: 1971. U.S. Government Printing Office, Washington, D.C., 1971. p. 13.

FIGURE 2: Growth Rate



---

[1] U.S. Bureau of Census. U.S. Census of Population: 1970. Number of Inhabitants. Final Report PC (1)-52A Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. p. 13.

[2] U.S. Bureau of Census. U.S. Census of Population: 1970. Number of Inhabitants, (Combined data from Idaho, Montana, Nevada, and Wyoming.) U.S. Government Printing Office, Washington, D.C., 1971.

[3] U.S. Bureau of Census. Statistical Abstract of the United States: 1960 and 1971 (Combined data). U.S. Government Printing Office, Washington, D.C.

D. ECONOMIC CHARACTERISTICS: STATISTICAL SUMMARY

Area Surveyed Sheridan County

County	*Per Capita Income*		*Family Median Income*	
	1960[1]	*1970*[2]	*1960*[1]	*1970*[2]
Albany*	$1,782	$2,738	$5,816	$8,535
Laramie*	2,152	2,993	6,386	9,162
Sheridan	1,792	2,896	5,306	8,096
. . . . .				
Wyoming		2,143		8,943[3]
Mountain States		3,395		8,995
United States		3,910		9,867

*These counties included to offer comparison of other Wyoming counties

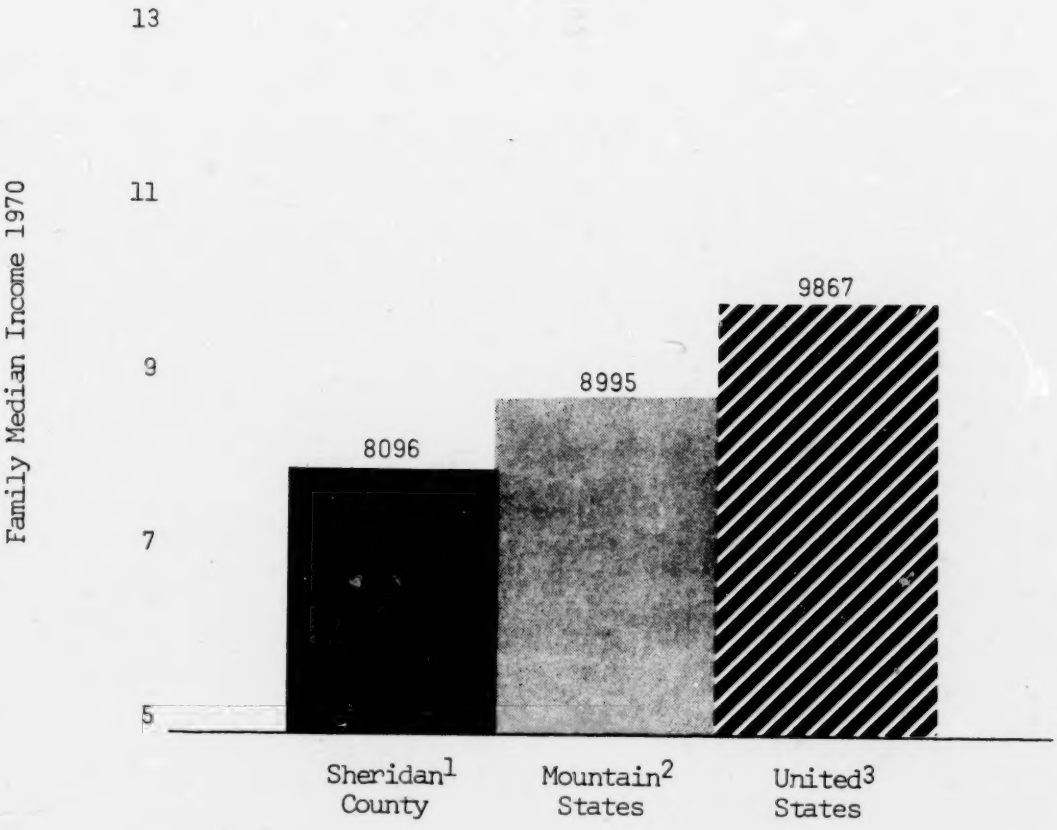
---

[1] U.S. Bureau of Census. Per Capita and Median Family Money Income in 1959 for States, SMA's and Counties. PC(SI)-48. U.S. Government Printing Office, Washington, D.C., 1960. p. 40.

[2] U.S. Bureau of Census. U.S. Census of Population: 1970. General Social and Economic Characteristics. Final Report PC (1)52C Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. pp.156-157.

[3] All United States and Mountain States data were obtained from the 1966 and 1971 Statistical Abstracts for the U.S. U.S. Government Printing Office, Washington, D.C.

FIGURE 3: Family Median Income



---

[1] U.S. Bureau of Census. U.S. Census of Population: 1970. General Social and Economic Characteristics. Final Report. PC (1)-52C Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. pp. 156-157.

[2] U.S. Bureau of Census. U.S. Census of Population: 1970. General Social and Economic Characteristics, (Combined data from Idaho, Montana, Nevada and Wyoming). U.S. Government Printing Office, Washington, D.C., 1971.

[3] U.S. Bureau of Census. Current Population Reports, Consumer Income. Series P-60, No. 78. U.S. Government Printing Office, Washington, D.C., 1971. p. 4.

E. OCCUPATIONAL CHARACTERISTICS: STATISTICAL SUMMARY

Selected Occupational Group of Employed Persons

Area Surveyed Sheridan County

	1960[2]	*1970*[3]
1. *TOTAL Professional, Technical and Kindred Workers*	785	1,078
a. *Medical, Dental and Other Health Workers*	237	289
b. *Salaried Medical and Health Workers (1960 only)*	147	
c. *Self-employed Medical and Health Workers (1960 only)*	90	
2. *Farmers and Farm Managers*	634	360
3. *Manager, Officials, Proprietors*	725	698
4. *Clerical, Kindred Sales*	1,255	1,487
5. *Craftsmen; Foremen and Kindred Workers*	840	691
6. *Operative and Kindred Workers including Transport*	626	582
7. *Service Workers*	834	1,020
8. *Farm Laborers and Foremen*	347	309
9. *Laborers except Farm*	362	276

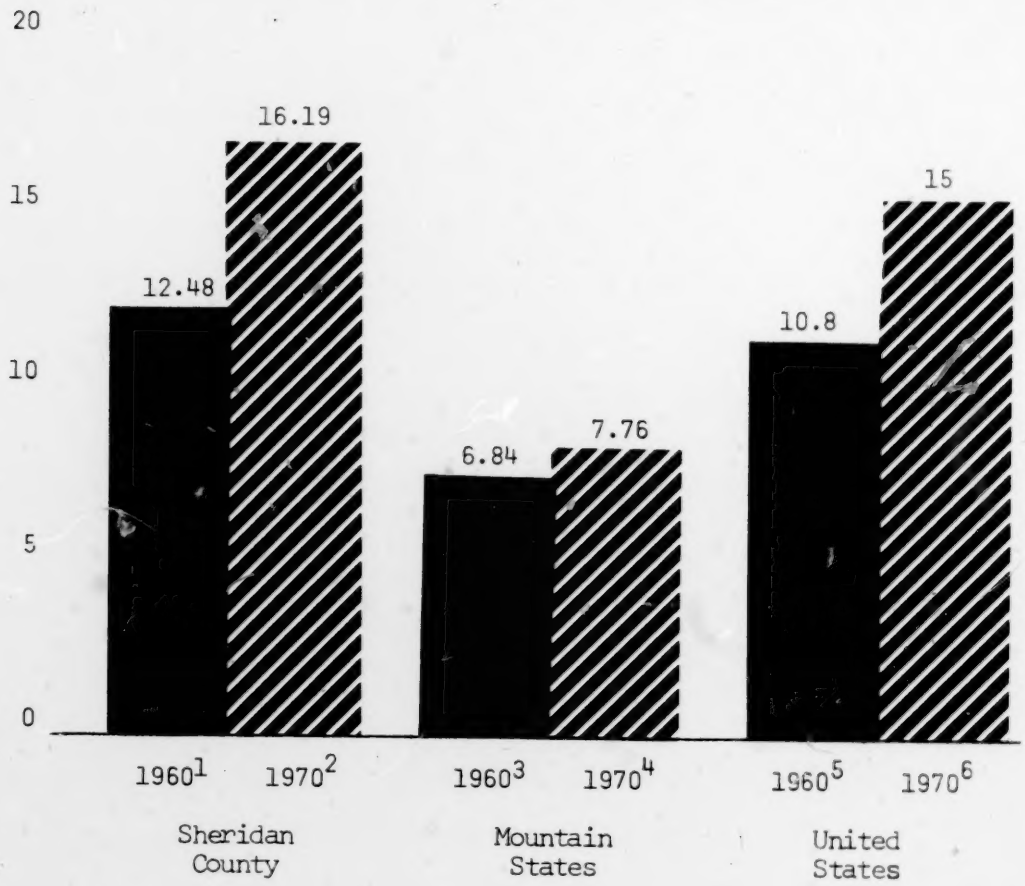
---

[1] This is not intended as a complete enumeration of the labor force in Sheridan County.

[2] U.S. Bureau of Census. U.S. Census of Population: 1960. General Social and Economic Characteristics. Final Report. PC (1)-52C Wyoming. U.S. Government Printing Office, Washington, D.C., 1961. p. 104.

[3] U.S. Bureau of Census. U.S. Census of Population: 1970. General Social and Economic Characteristics. Final Report. PC (1)-52C Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. p. 152.

FIGURE 4: Medical, Dental and Other Health Workers



---

[1] U.S. Bureau of Census. U.S. Census of Population: 1960. General Social and Economic Characteristics, Final Report PC(1)-14C Wyoming. U.S. Government Printing Office, Washington, D.C., 1961. p. 102.

[2] U.S. Bureau of Census. U.S. Census of Population: 1970. General Social and Economic Characteristics, Final Report PC(1)-14C Wyoming. U.S. Government Printing Office, Washington, D.C., 1971. p. 152.

[3] U.S. Bureau of Census. U.S. Census of Population: 1960. General Social and Economic Characteristics (Combined data of Idaho, Montana, Nevada and Wyoming), U.S. Government Printing Office, Washington, D.C., 1961.

[4] U.S. Bureau of Census. U.S. Census of Population: 1970. General Social and Economic Characteristics (Combined data of Idaho, Montana, Nevada and Wyoming), U.S. Government Printing Office, Washington, D.C., 1971.

[5] U.S. Bureau of Census. Statistical Abstract of the United States: 1962. U.S. Government Printing Office, Washington, D.C., 1962. p. 823.

[6] U.S. Bureau of Census. Statistical Abstract of the United States: 1971. U.S. Government Printing Office, Washington, D.C., 1971. Table 90.

SECTION II: HEALTH MANPOWER

A. INTRODUCTION

This section deals with the number of persons employed in Sheridan County in the health professions. In our search of the literature, we found no current enumeration of health professionals in Sheridan County; consequently, the following data was obtained from primary sources by means of interview, questionnaire, etc., except where noted otherwise.

It is our intent here to provide the reader with a current and accurate statistical picture of the health manpower situation in Sheridan County. Thus, the raw data is ordered in a rather cumbersome, but necessary, nineteen by one-hundred-and-three matrix. The horizontal axis provides the work setting in which the health professionals in Sheridan County are employed; the vertical axis indicates the various health occupations which were surveyed. (For the working definitions of these health occupations, see Appendix I.)

The reader will note that many of the occupational categories in various work settings are blank. Rather than omit these, the research team felt that noting the absence of certain categories of health professionals was perhaps an important set of information for the reader.

B. NARRATIVE SUMMARY

We have selected six health occupations to provide a comparison of concentrations of manpower in Sheridan County to the surrounding area and to the United States in general. The most noticeable difference is the extremely high concentration of registered nurses

in Sheridan County. The figure is almost double of that for the Mountain States and the United States. At a lower ratio overall, the number of practicing psychologists is considerably higher. As an overview, Sheridan County seems to have nearly as high or higher concentrations of these particular health workers as/ than does the Nation taken as a whole. (see Figure 5)

C. HEALTH MANPOWER: STATISTICAL SUMMARY

	Employment Settings *																		
	1	2a	2b	2c	3a	3b	3c	4a	4b	4c	4d	5	6a	6b	7	8a	8b	8c	9	Total
1. Administration																				
a. Hospital Administration					1	2														3
b. Nursing Home Administration												1								1
2. Dentistry																				
a. Dentists																				
1) Endodontists																				
2) Oral Pathologists																				
3) Oral Surgeons																				
4) Orthodontists	1																			1
5) Pedodontists																				
6) Periodontists																				
7) Prosthodontists																				
8) Public Health Dentists																				
9) General Dentistry	10					3														13
b. Dental Hygienists	3					1.5														4.5
c. Dental Laboratory Technicians						1														1

Legend

1 -Private Office
2a-Diagnostic Clinic
2b-Treatment Clinic
2c-Diagnostic/Treatment Clinic
3a-Community Hospital
3b-V.A. Hospital
3c-Military Installation
4a-Community Health Service
4b-County Health Service
4c-State Health Service
4d-Federal Health Service
5 -Nursing Home
6a-Mental Hospital
6b-Mental Health Center
7 -Business and Industry
8a-Educational Institution: Practicing
8b-Educational Institution: Teaching
8c-Educational Institution: Teaching and Practicing
9 -Health Planning and Development Organizations

Employment Settings*

	1	2a	2b	2c	3a	3b	3c	4a	4b	4c	4d	5	6a	6b	7	8a	8b	8c	9	Total
3. *Dietetic and Nutritional Services*																				
a. *Dietitians*					1	2									1					4
b. *Nutritionists*																				
4. *Emergency Health Services*																				
a. *Emergency/Ambulance Attendants*	10														1					11
5. *Environmental Health Services*																				
a. *Health Physicists*																				
b. *Industrial Hygienists*																				
c. *Environmental Scientists*																				
d. *Sanitarians*																				
e. *Public Health Engineers*																				
6. *Health Education*																				
a. *Public Health Educators*																				
b. *School Health Educators*																	2			2
c. *Health Science Educators*																				
7. *Health Planning*																				
a. *Patient Care Analysts*																				
b. *Health Care Planners*																				
c. *Bio-statisticians*																				
8. *Medical Librarians*						.5														.5

Legend: Refer to first page of this summary.

Employment Settings*

	1	2a	2b	2c	3a	3b	3c	4a	4b	4c	4d	5	6a	6b	7	8a	8b	8c	9	Total
9. *Medical Records Services*																				
a. *Medical Record Librarians*					1	1														2
b. *Record Technicians*																				
c. *Record Clerks*					3															3
10. *Medical Technology*																				
a. *Medical Technologists*		1			1.5															2.5
b. *Medical Technicians*		1			2															3
c. *Certified Lab Technicians*						2														2
d. *Cytology/Tissue Technicians*					2															2
e. *Laboratory Assistants*																				
11. *Medicine and Osteopathy*																				
a. *Physicians*																				
Allergist																				
Anesthesiologist																				
Aviation Medicine Spec.																				
Cardiovascular Dis. Spec.																				
Colon-Rectal Surg. (Proc.)																				
Dermatologist																				
Emergency Specialist																				
Endocrinologist																				
Gastroenterologist																				
General Practitioner	6.5					4														9.5
Gynecologist/Obstetrician	1																			1
Internist	1.5																			1.5
Manipulative Therapy Spec.																				
Neurological Surgeon																				
Neurologist																				
Occupational Med. Spec.																				
Opthalmologist	2																			2
Orthopedic Surgeon	1																			1

Legend: Refer to first page of this summary.

Employment Settings*

	1	2a	2b	2c	3a	3b	3c	4a	4b	4c	4d	5	6a	6b	7	8a	8b	8c	9	Total
a. Physicians (continued)																				
Otolaryngologist																				
Pathologist					1															1
Pediatrician	1																			1
Physiatrist						5								1						6
Plastic Surgeon																				
Preventive Med. Spec.																				
Psychiatrist						5								1						6
Public Health Physician																				
Pulmonary Disease Spec.																				
Radiologist					2															2
Surgeon	4																			4
Thoracic Surgeon																				
Urologist	1																			1
Intern																				
Resident																				
b. Osteopathic Physicians																				
12. Nursing and Related Services																				
a. Registered Nurses	4				41.5	49			2			11		1		1				109.5
b. Licensed Practical Nurses					11.5	5														16.5
c. Nurse Aides/Orderlies					48.5	101														149.5
d. Ward Clerks																				
e. Surgical Technicians																				
13. Pharmacy																				
a. Pharmacists	8				1.5	2														11.5
b. Pharmacy Aides					2	1														3
c. Pharmacy Interns																				

*Legend: Refer to first page of this summary.

Employment Settings*

	1	2a	2b	2c	3a	3b	3c	4a	4b	4c	4d	5	6a	6b	7	8a	8b	8c	9	Total
14. *Chiropractors*																				
15. *Radiologic Technology*																				
a. *Technologists*																				
b. *Technicians*	2				5	2														9
16. *Medical Secretarial/Office Personnel*					12.5	34														46.5
17. *Psycho-Social Health Services*																				
a. *Psychologists (MA & PhD)*						4								.5						4.5
b. *Social Service Workers*						8														8
c. *Vocational Rehabilitation Counseling*										1										1
18. *Therapists*																				
a. *Speech Pathology Therapists*	2															1				3
b. *Audiologists*																				
c. *Physical Therapists*					1	3														4
d. *Occupational Therapists*						3														3
e. *Inhalation Therapists*						1														1
f. *Orthotists-Prosthetists*																				
g. *Manual Arts Therapists*						2														2
h. *Recreational Therapists*						3														3
19. *Veterinarians*	7																			7

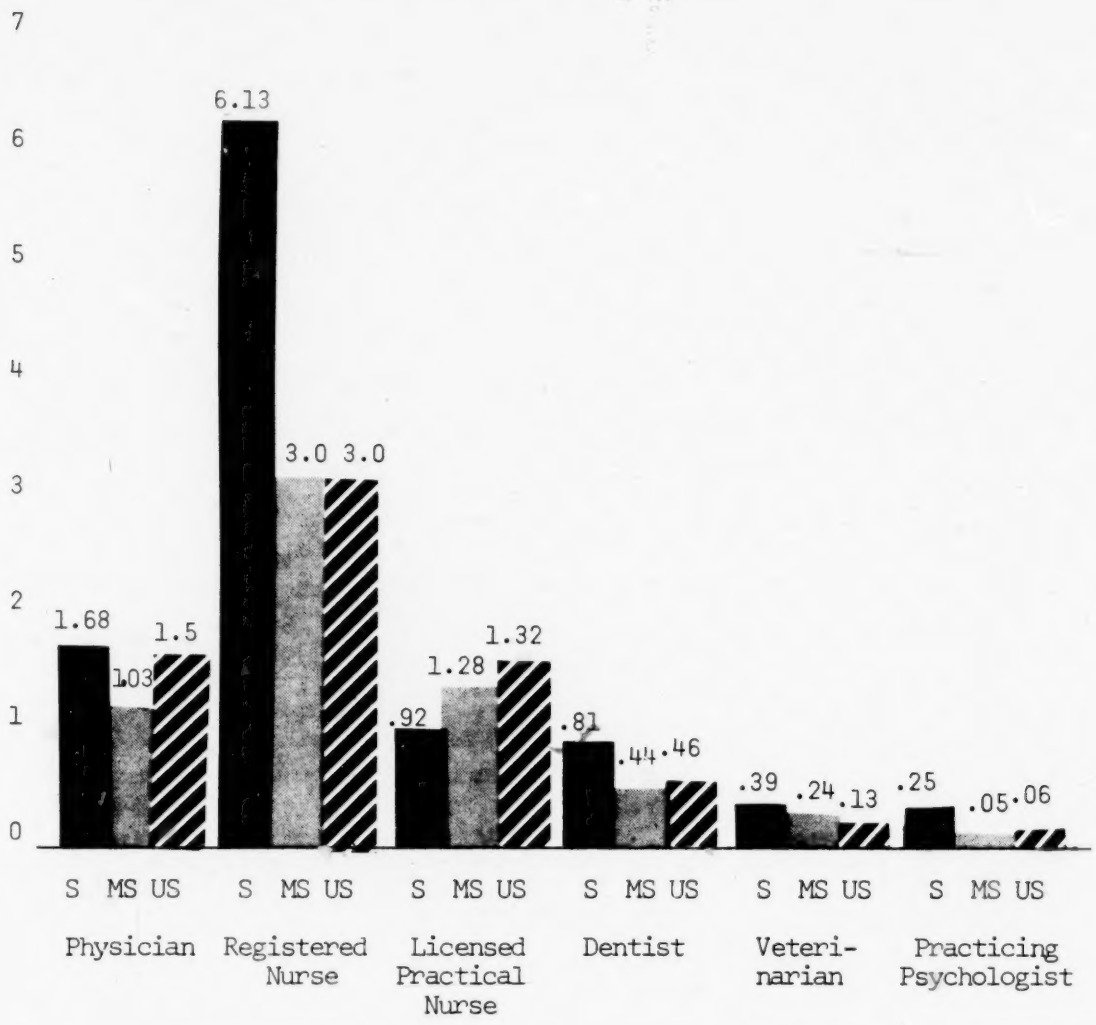
Legend: Refer to first page of this summary.

Employment Settings*

	1	2a	2b	2c	3a	3b	3c	4a	4b	4c	4d	5	6a	6b	7	8a	8b	8c	9	Total
20. *Physician Support Personnel*																				
a. *Physician's Assistants*																				
b. *Nurse Clinicians*																				
c. *Nurse Anesthetists*																				
21. *Other*																				
a. *Bio-Engineering*																				
b. *ECG Technicians*						.5														.5
c. *EEG Technicians*						.5														.5
d. *Optometrists*	2																			2
e. *Orthoptists*																				
f. *Podiatrists*						1														1

*Legend: Refer to first page of this summary.

FIGURE 5: Selected Health Personnel



S = Sheridan County
MS= Mountain States
US= United States

---

[1] All Mountain States and U.S. data from: USDHEW. Health Resources Statistics: 1971 Edition. Publication No. (HSM) 72-1509. U.S. Government Printing Office, Washington, D.C., 1972.

SECTION III: EDUCATION OF HEALTH MANPOWER

A. INTRODUCTION

This section is divided into three sets of information concerning the educational facilities which train persons to work in the health professions. The first portion of this section is a listing of the various institutions, and programs within those institutions, which provide original training for the health professions in Sheridan County. This listing includes the time required for certification for a given program as well as the number of persons who have been enrolled and who have graduated in the last three years, where such information was available. A blank space in the "enrollee-graduate" section indicates that this information was not available at the time of this publication or that the program was not operative at that time.

The second portion lists all the other institutions, and programs within those institutions which train health professionals in the State of Wyoming outside of Sheridan County. Here only a simple listing of such programs is given without the inclusion of training time or enrollee-graduate information.

The third portion of this section is an itemization of "health facility libraries" including the number of books and periodicals in those libraries in Sheridan County; and the location and type of video-tape equipment on hand in health facilities in Sheridan County.

The research team has not provided comparison data here for the relative ratios of graduates in the health professions for two major reasons. First, the location of training institutions would provide an obviously higher concentration of graduates to population than would be expected over a normal distribution including areas which do not have training programs for health professionals. Secondly, the number of graduates in a given health training program seems not to be an accurate indicator of the availability of these newly trained health workers for that area; e.g., the fact that Sheridan College produced 14 graduates in their Dental Hygiene program in 1972 does not necessarily mean that there are 14 newly trained dental hygienists available to work in the Sheridan area this year. Some of these persons will obviously seek work elsewhere; others will not be employed, etc. Consequently, we felt that such comparison data to Regional or National ratios would be more misleading than helpful.

B. EDUCATION OF HEALTH MANPOWER: ORIGINAL EDUCATION PROGRAMS

Area Surveyed Sheridan County

Institutions Certifying Health Personnel

1. Community Colleges

A. Sheridan College
(Name)

1) Dental Hygiene — 2 Years
(Type of Program) — *(Time for Certification)*

	1970	*1971*	*1972*
*a. Enrollees**	17	24	24
*b. Graduates***	0	12	14

* Data for "Enrollees" is for September of that year
** Data for "Graduates" is for June of that year

C. HEALTH EDUCATION PROGRAMS: ORIGINAL EDUCATION OUTSIDE AREA AND IN-STATE

Area Surveyed Wyoming

Original Education Centers (Name and Location)	Personnel Categories Trained
Casper College Casper, Wyoming	Nursing, A.D. and Baccalaureate Transfer, Licensed Practical Nurse
Central Wyoming College Riverton, Wyoming	Nursing, Pharmacy
Eastern Wyoming College Torrington, Wyoming	Pre-Nursing
Northwest Community College Powell, Wyoming	Pre-Med Technology, Pre-Pharmacy, Mortuary, Chiropractor, Physical Therapy, Pre-Optometry, Pre-Occupational Therapy, Child Health Association
Laramie Vocational School of Practical Nursing Laramie, Wyoming	Licensed Practical Nurse
Laramie County Community College Cheyenne, Wyoming	Surgical Technician, X-ray Technician, Environmental Health, Medical Secretary, Licensed Practical Nurse
Memorial Hospital of Laramie County Cheyenne, Wyoming	Inhalation Therapy
University of Wyoming Laramie, Wyoming	Pharmacy, Registered Nurse, Medical Technology, Speech Pathology and Audiology, Psychology (M.A. and Ph.D.)

D. HEALTH EDUCATION RESOURCES

Area Surveyed **SHERIDAN COUNTY**

	Number of Books	Number of Periodicals
1. Health Science Libraries		
a. Specialized (e.g. Biological Sciences)		
Library (Dental Hygiene) Sheridan College Sheridan, Wyoming	74	3
b. Health Facility Libraries		
(List) Names and Addresses		
Memorial Hospital of Sheridan County Sheridan, Wyoming	100	10
Whedon Cancer Detection Foundation Sheridan, Wyoming	0	17
V.A. Hospital Sheridan, Wyoming	1,850 (Medical) 4,968 (General)	177

2. Video-Tabe Capability

Locations	Brand	Quantity	Size
Memorial Hospital of Sheridan County Sheridan, Wyoming	Fairchild Mark IV	1	8mm (Playback only)

E. HEALTH EDUCATION PROGRAMS: CONTINUING EDUCATION IN AREA

Area Surveyed Sheridan County

Name of Person in Charge of Continuing Education	Primary Target Group	*Percent of Time Given to Continuing Education
Jean Holwell Memorial Hospital of Sheridan County Sheridan, Wyoming	Nursing	15%
Wayne Maddocks Chairman, Training and Development Committee V.A. Hospital Sheridan, Wyoming	In-Hospital Personnel	50%

*Estimate

SECTION IV: HEALTH FACILITIES

A. INTRODUCTION

This fourth and final section contains a listing of the numbers of hospitals, nursing homes, medical clinics, dental facilities, clinical laboratories, mental health centers, pharmacies, and ambulances. Simply, this listing is intended to give a statistical picture of structural direct-care capability of the area without regard to the health professionals required to man these facilities.

The research team has provided graphic comparisons for the ratio of hospital beds, nursing home beds, pharmacists, and ambulances per thousand population to the Mountain States Region and to the United States in order to give the reader a basis for judging the relative concentration of these facilities in this particular area.

B. NARRATIVE SUMMARY

The data indicates that Sheridan County exhibits a somewhat higher concentration of hospital and nursing home beds in relation to the United States. (see Figure 6)

There is a comparable ratio of pharmacists to population in Sheridan. The number of ambulances per 1000 population is higher in Sheridan County than for the United States. (see Figure 7)

It seems important here to note, however, that the distribution of health facilities is in no way reflected in the concentration figures; perhaps a more accurate picture of these facilities could be realized by examining the geographical area served by these facilities.

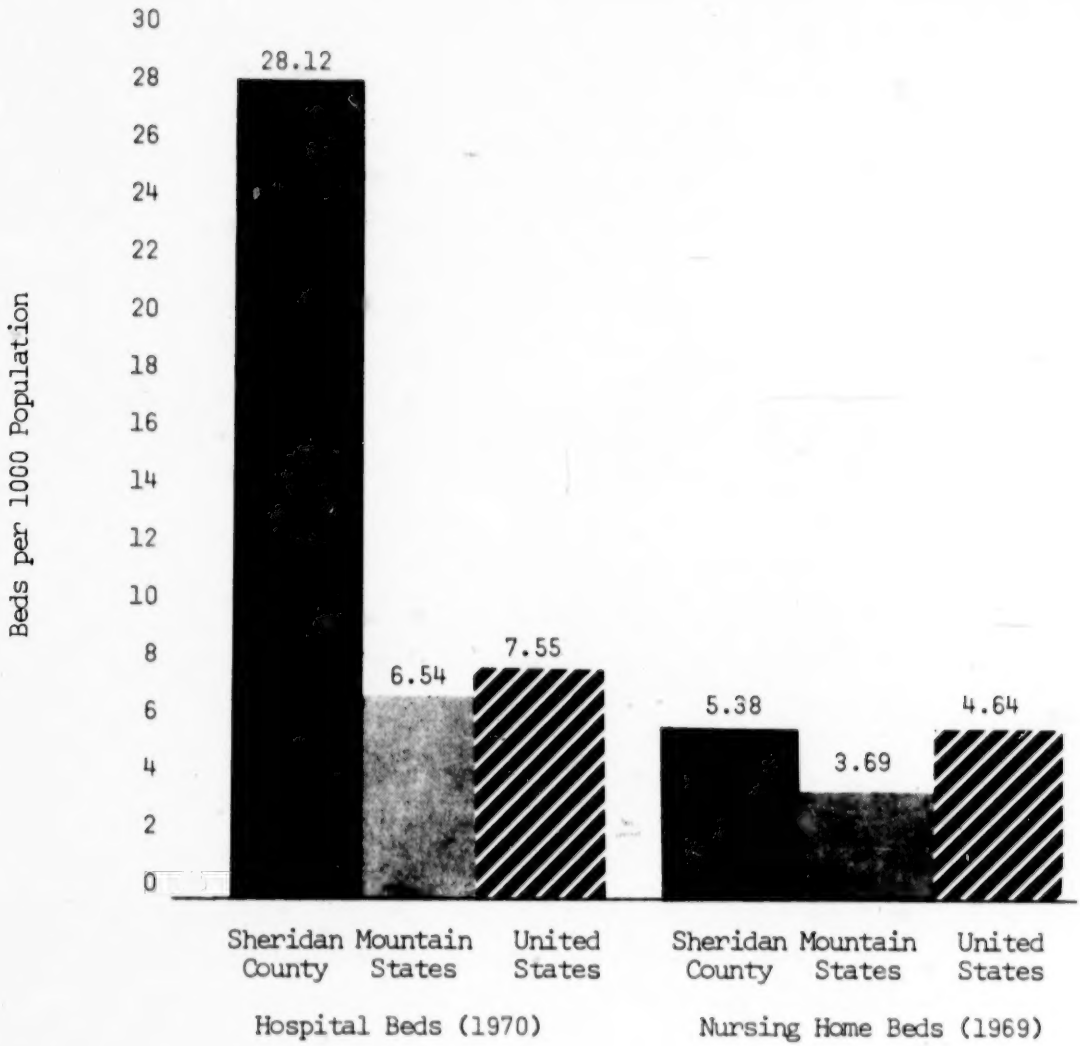
C. HEALTH FACILITIES: DATA SUMMARY

Area Surveyed Sheridan County

INSTITUTIONS

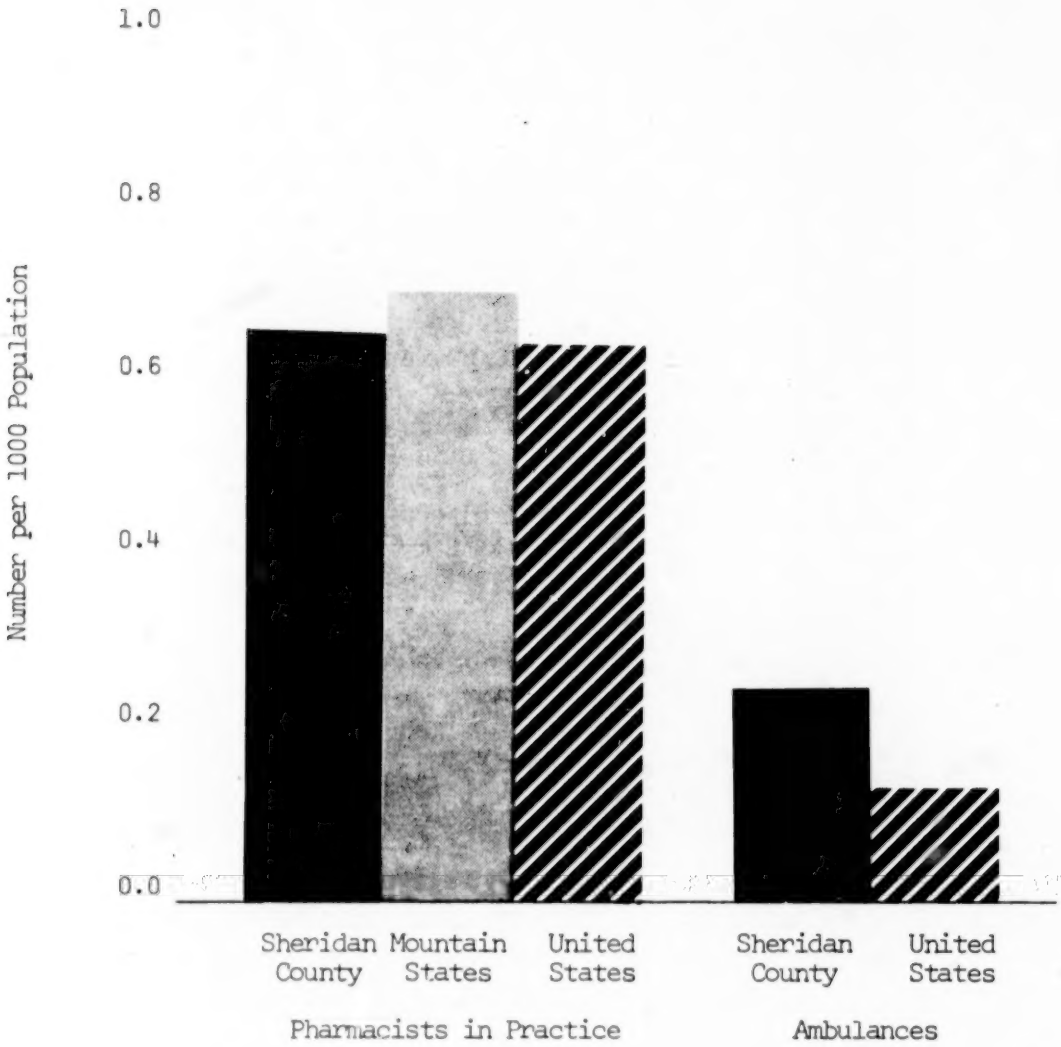
1. Hospitals	2
a. Number Beds	502
2. Nursing Homes	1
b. Number Beds	96
3. Medical (CLinics)	0
4. Dental Facilities	10
5. Clinical Laboratories	1
6. Mental Health Centers	1
7. Pharmacies	6
8. Ambulances	4

FIGURE 6: Hospital and Nursing Home Beds



[1] All Mountain States and United States Data from: USDHEW. Health Resources Statistics: 1971 Edition. Publication No. (HSM) 72-1509. U.S. Government Printing Office, Washington, D.C., 1972.

FIGURE 7: Pharmacists -- Ambulances



[1] All Mountain States and U.S. data from: USDHEW Health Resources Statistics: 1971 Edition. Publication No. (HSM) 72-1509. U.S. Government Printing Office, Washington, D.C., 1972.

APPENDIX I

MS/RMP WORKING DEFINITIONS OF HEALTH OCCUPATIONS

1. Administration
   a. Hospital Administrators and Assistant Administrators
      Administer and coordinate activities of hospital personnel to promote care of sick and injured, furtherance of scientific knowledge, development of preventive medicine, advancement of medical and vocational rehabilitation, and participation in and promotion of community health and welfare.
   b. Nursing Home Administrators and Assistant Administrators
      Same as above, except in nursing homes.
2. Dentistry
   a. Dentists
      1) Endodontists
         Concerned with the etiology, prevention, diagnosis and treatment of diseases and injuries that affect the tooth pulp and apical periodontal tissues.
      2) Oral Pathologists
         Examine and diagnose tumors and lesions of mouth.
      3) Oral Surgeons
         Perform surgery on mouth and jaws.
      4) Orthodontists
         Prevent, diagnose, and correct deviations from normal that occur in growth, development, and position of teeth and other dental-facial structures.
      5) Pedodontists
         Treat children's teeth.
      6) Periodontists
         Treat inflammatory and destructive diseases of investing and supporting tissue of teeth.
      7) Prosthodontists
         Restore and maintain oral functions.
      8) Public Health Dentists
         Participate in planning, organizing, and maintaining dental health program of public health agency.
      9) General Dentistry
         Diagnose and treat diseases, injuries, and malformations of teeth and gums, and related oral structures.
   b. Dental Hygienists
      Perform dental prophylactic treatments and instruct groups and individuals in care of teeth and mouth.
   c. Dental Laboratory Technicians
      Make dentures, partials, etc., as needed by the dentist.
3. Dietetic and Nutritional Services
   a. Dietitians
      Plan and direct food service programs in hospitals, schools restraunts, and other public or private institutions.

b. Nutritionists
Organize, plan and conduct programs concerning nutrition to assist in promotion of health and control of disease.

4. Emergency Health Services
   a. Emergency/Ambulance Attendants
   Assist persons entering hospital through emergency entrances; and accompany and assist ambulance driver in transporting sick, injured, or convalescent persons.
5. Environmental Health Services
   a. Health Physicists
   Devise and direct research, training, and monitoring programs to protect plant and laboratory personnel from radiation hazards.
   b. Industrial Hygienists
   Conduct health program in industrial plant or similar organization to eliminate or control occupational health hazards and diseases.
   c. Environmental Scientists
   Perform research related to specific man-made or natural environmental hazards to health.
   d. Sanitarians
   Work with general environmental problems related to the control of food and drink, private water supplies and sewage disposal, and control of insects and rodents.
   e. Public Health Engineers
   Design, construct and maintain large engineering systems or programs and know how public health is affected by these systems.
6. Health Education
   a. Public Health Educators
   Plan, organize and direct health education programs for group and community needs.
   b. School Health Educators
   Plan, organize and direct health education programs in schools.
   c. Health Science Educators
   Provide health care and health prevention instruction through community, county, or state organizations.
7. Health Planning
   a. Patient Care Analysts
   Engage in analyzing the comprehensive care of in-patients in an institution, usually a hospital.
   b. Health Care Planners
   Analyze health needs and services, propose improvements and assist in the implementation of health care programs.
   c. Bio-statisticians
   Plan surveys, and collect, organize, interpret, summarize, and analyze numerical data on sampling or complete enumeration bases, applying statistical theory and methods to provide usable information in scientific and other fields.
8. Medical Librarians
   Manage library or section containing specialized materials for hospitals.
9. Medical Records Services
   a. Medical Record Librarians
   Compile and maintain medical records of hospital and clinic patients.

b. Record Technicians
Engaged in the formulation of and handling of medical data recording procedures.
c. Record Clerks
Classify medical records of hospital patients and compile statistics for use in reports and surveys.

10. Medical Technology
a. Medical Technologists (usually a 4 year degree)
Perform chemical, microscopic, and bacteriologic tests to provide data for use in treatment and diagnosis of disease.
b. Medical Technicians (usually a 2 year degree)
Perform routine tests in medical laboratory for use in treatment and diagnosis of disease.
c. Certified Laboratory Technicians (usually train in 1 year or less)
Same as b.
d. Cytology/Tissue Technicians
Perform laboratory analysis on cell and tissue samples.
e. Laboratory Assistance to the above personnel in laboratory responsibilities.

11. Medicine and Osteopathy
a. Physicians
1) Allergists
Specialize in the diagnosis and treatment of allergic conditions.
2) Anesthesiologists
Administer anesthetics to render patients insensible to pain during surgical, obstetrical and other medical procedures.
3) Aviation Medicine Specialists
Administer general medicine to flight personnel only.
4) Cardiovascular Disease Specialists
Specialize in the diagnosis and treatment of diseases of the heart and blood vessels.
5) Colon and Rectal Surgeons (Proctologists)
Specialize in the treatment of the rectum and its diseases.
6) Dermatologists
Diagnose and treat diseases of the human skin.
7) Emergency Specialists
Physicians who work in hospital emergency rooms and handle emergency type cases.
8) Endocrinologists
Skilled in the diagnosis and treatment of disorders of the glands of internal secretion.
9) Gastroenterologists
Specialize in diseases of the stomach and intestine.
10) General Practitioners
Attend to a variety of medical cases in general practice.
11) Gynecologists/Obstetricians
Treat and diagnose diseases of the female generative organs; treat women during prenatal, natal, and postnatal periods.
12) Internists
Specialize in the diagnosis and medical treatment of diseases and disorders of the internal structures of the human body.

13) Manipulative Therapy Specialists
Specialize in prescription and supervision of therapeutic administrations.

14) Neurological Surgeons
Specialize in surgery of th nervous system.

15) Neurologists
Diagnose and treat organic diseases and disorders of the nervous system.

16) Occupational Medicine Specialists
Specialize in diagnosis and care of individuals in specific occupations and settings.

17) Opthalmologists
Diagnose and treat diseases and injuries of the eyes.

18) Orthopedic Surgeons
Preserve, restore, and develop form and function of the extremities, spine, and associated structures by medical, surgical, and physical methods.

19) Otolaryngologists
Diagnose and treat diseases of the ear, nose and throat.

20) Pathologists
Study nature, cause, and development of diseases, and structural and functional changes caused by them.

21) Pediatricians
Plan and carry out medical care program for children from birth through adolescence to aid in mental and physical growth and development.

22) Physiatrists
Specialize in clinical and diagnostic use of physical agents and exercises to provide physiotherapy for physical, mental and occupational rehabilitation of patients.

23) Plastic Surgeons
Specialize in skin grafts and bone and tissue transplants to restore or repair damaged, lost or deformed parts of the face and body.

24) Preventive Medicine Specialists
Specialize in prescribing practices which prevent physical subsumption and deterioration.

25) Psychiatrists
Study, diagnose and treat diseases and disorders of the mind.

26) Public Health Physicians
Generalists or specialists employed by the community, county, or state.

27) Pulmonary Disease Specialists
Specialize in treating diseases of the lung.

28) Radiologists
Diagnose and treat diseases of the human body, using X-rays and radio-active substances.

29) Surgeons
Perform surgery to correct deformities, repair injuries, prevent diseases, and improve function in patients.

30) Thoracic Surgeons
Perform surgery on the chest.

31) Urologists
Diagnose and treat diseases and disorders of the genito-urinary organs and tract.

32) Interns
Perform medical duties while serving in hospital for specified length of time to gain practical experience immediately following graduation from medical school, as requirement for license to practice medicine.

33) Residents
Graduate and licensed physicians resident in a hospital.

b. Osteopathic Physicians

12. Nursing and Related Services

a. Registered Nurses
A term applied to persons meeting the educational, legal, and training requirements to practice as professional nurses, as required by a State board of nursing.

b. Licensed Practical Nurses
Care for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions.

c. Nurse Aides/Orderlies/Attendants
Assist in care of hospital patients, under direction of nursing and medical staff.

d. Ward Clerks
Prepare and compile records in hospital nursing unit, such as obstetrics, pediatrics or surgery.

e. Surgical Technicians
Health personnel trained specifically to work in an operating room.

13. Pharmacy

a. Pharmacists
Compound and dispense medications, following prescriptions issued by physicians, dentists or other authorized medical practitioners.

b. Pharmacy Aides
Mix pharmaceutical preparations, under direction of pharmacist, issue medicine, label and store supplies, and clean equipment and work areas in hospital pharmacy.

c. Pharmacy Interns
Pharmacy students who work under the supervision of a registered pharmacist.

14. Chiropractors
Adjust spinal column and other articulations of body to prevent disease and correct abnormalities of human body believed to be caused by interference with the nervous system.

15. Radiologic Technology

a. Technologists (usually a 4 year degree)
Apply roentgen rays and radioactive substances to patients for diagnostic and therapeutic purposes.

b. Technicians (less than a 4 year degree)
Same as a.

16. Medical Secretarial/Office Personnel
Prepare medical charts and reports for doctor or hospital personnel, utilizing knowledge of medical terminology. May prepare and send bills to patients and record appointments and perform general secretarial and clerical services in a medical setting.

17. Psycho-Social Health Services
    a. Psychologists (M.A. or Ph.D.)
    Diagnose mental and emotional disorders of individuals and administer programs of treatment.
    b. Social Service Workers
    Counsel or otherwise assist persons for improved social adaptation, e.g., Social Workers, etc.
    c. Vocational Rehabilitation Counseling
    Persons engaged in counseling individuals and providing group educational and vocational guidance services.

18. Therapists
    a. Speech Pathology Therapists
    Examine and provide remedial services for patients with speech and language disorders.
    b. Audiologists
    Specialize in diagnostic evaluation, habilitative and rehabilitative services, and research related to hearing.
    c. Physical Therapists
    Treat patients with disabilities, disorders, and injuries to relieve pain, develop or restore function, and maintain maximum performance, using physical means such as exercise, massage, heat, water, light, and electricity as prescribed by physician.
    d. Occupational Therapists
    Plan, organize, and participate in medically oriented occupational program in hospital or similar institution to rehabilitate patients who are physically or mentally ill.
    e. Inhalation Therapists
    Set up and operate various types of oxygen equipment, such as iron lungs, oxygen tents, resuscitators and incubators to administer oxygen and other gases to patients.
    f. Orthotists-Prosthetists
    Write specifications for and fit artificial limbs, braces, and appliances for body deformities and disorders following prescription of physician or other qualified medical practitioner.
    g. Manual Arts Therapists
    Instruct patients in prescribed manual arts activities to prevent anatomical and phsiological deconditioning, and to assist in maintaining, improving, or developing work skills.
    h. Recreational Therapists
    Plan, organize and direct medically approved recreation program for patients in hospitals and other institutions.

19. Veterinarians
Diagnose and treat diseases and disorders of animals.

20. Physician Support Personnel
    a. Physician's Assistants
       Assist physician by performing diagnostic and therapeutic procedures under the general supervision and responsibility of the physician. Special academic-professional training of one to two years in classroom and clinical work.
    b. Nurse Clinicians
       Registered nurses who assist a physician by performing diagnostic and therapeutic procedures under the general supervision and responsibility of the physician.
    c. Nurse Anesthetists
       Registered nurses trained and qualified to administer anesthetics.
21. Other
    a. Bio-Engineering
       Practice of design and innovation of mechanical/electrical devices for biological functioning.
    b. ECG Technicians
       Personnel trained to operate an electrocardiograph.
    c. EEG Technicians
       Personnel trained to operate an electroencephalograph.
    d. Optometrists
       Examine eyes to determine visual efficiency and performancy by means of instrumentation and observation, and prescribe corrective procedures.
    e. Ortoptists
       Teach persons with correctable focusing defects to develop and use binocular vision (focusing of both eyes).
    f. Podiatrists
       Diagnose and treat structural problems relating to the foot.

APPENDIX 2

PRIMARY DATA SOURCES

Area Surveyed Sheridan County

SOURCE	DATA TYPE
Mrs. Esther McKenzie Public Health Nurse P.O. Box 508 Sheridan	Personnel and Educational Resources
G. S. Myers, D.D.S. Dean, Allied Health Sheridan College Sheridan	Same
Dr. Don Morrison, Director Mental Health Center, Northern Wyoming 34 North Main Street Sheridan	Same
Lillian Smith Whedon Cancer Detection Foundation P.O. Box 683 Sheridan	Same
Dr. Harold Stokes, Admin. Veterans Administration Hospital, Ft. McKenzie	Same
Vocational Rehabilitation Office 211 Lonabaugh Building Sheridan	Same
Jack Yale, Admin. Memorial Hospital 5th and Jackson Sheridan	Same

PRIMARY DATA SOURCES (Contd)

SOURCE	DATA TYPE
Private Work Settings of: Businesses and Industries Dentists Optometrists Pharmacists Physicians Veterinarians	

APPENDIX 3

SECONDARY DATA SOURCES

Area Surveyed Sheridan County

SOURCE	DATA TYPE
American Dental Association Directory (published annually)	Dentists and Addresses of Employment
American Hospital Association Directory	Hospitals: Number of Beds; Location, etc.
American Medical Association Directory, 1969	Physicians and Specialties by Counties
Bluebook of American Colleges and Universities (four volumes)	Health Education Training Programs by Institution and Specific Addresses, etc.
Bureau of the Census Commerce Department	1960 and 1970 Demographic Data
Comprehensive Health Planning State of Wyoming	Manpower Survey of Health Personnel in Wyoming, 1971
Medical Assistance and Services Title XIX	Licensure of all Health Field Personnel in State
Medical Facilities Services and Medicare	Institutional Information
Official Directory of Registered and Licensed Practical Nurses in the State of Wyoming (State Board of Nursing)	Nursing and Related Services Personnel
Official Directory of Wyoming Board of Dental Examiners (State Dental Services)	Dentists, Specialties, and Dental Hygienists
Selected Training Programs for Physician Support Personnel (USDHEW: March 1971)	Original Education for Health Personnel in United States (Incomplete)
State Mental Health and Retardation	Mental Health Personnel: Social Work Psychology Psychiatry Institutions

SECONDARY DATA SOURCES (Contd.)

SOURCE	DATA TYPE
Telephone Directories	Physicians, Specialties; Health Agencies; Private Nurses; Health Institutions
Wyoming MS/RMP Health Profile Updated Supplement 2 May, 1972	Wyoming Health Personnel Quantities
Wyoming Public Health Service	Emergency Service Personnel (ER's and Ambulance, etc.)
Wyoming State Medical Society	All Physicians in Wyoming to date; practicing, retired, etc.

REGIONAL ADVISORY COUNCIL

*Arthur R. Abbey, Chairman, Cheyenne, Wyoming
Herrick J. Aldrich, M.D., Sheridan, Wyoming
John Ayers, M.D., Moscow, Idaho
David Brandsness, Las Vegas, Nevada
Shayne Del Cohen, Reno, Nevada
Arthur V. Crandall, Missoula, Montana
Edwin G. Flittie, Ph.D., Laramie, Wyoming
*J. B. Gramlich, M.D., Cheyenne, Wyoming
Louise Haney, R.N., Boise, Idaho
Keith Henning, Cheyenne, Wyoming
Sid K. Hullinger, McGill, Nevada
George D. Humphrey, Ph.D., Laramie, Wyoming
Alma S. Jacobs, Great Falls, Montana
William Johnstone, Bozeman, Montana
Joseph E. Karpach, Boise, Idaho
Loryn E. Kopan, Boise, Idaho
*Richard Licata, Ph.D., Reno, Nevada
Dwight Marshall, Las Vegas, Nevada
Richard C. Mattson, Lakeside, Montana
Donald Ness, R.Ph., Boise, Idaho
*Thomas Norris, Pocatello, Idaho
Dix Shevalier, Helena, Montana
Sister Helen Frances, Lewiston, Idaho
*A. L. Vadheim, M.D., Bozeman, Montana
Emil Van Remoortere, M.D., Reno, Nevada
*Laura O. Walker, R.N., Ph.D., Vice-Chairman, Bozeman, Montana
*Paul D. Ward, Oakland, California
Thomas S. White, M.D., Boulder City, Nevada

*Executive Committee

MOUNTAIN STATES REGIONAL MEDICAL PROGRAM STAFF

IDAHO OFFICE

Bonnie Arriaga
Lorin Gaarder
Phoebe Lindsey
*C. E. Smith, Ph.D.
Clarice Watson

REGIONAL OFFICE

Kathy Dean
**John W. Gerdes, Ph.D.
Mary Henry
Beverly Holderby
Laura G. Larson, R.N.
Patricia Rossman
Jerry Selby
C. E. Smith, Ph.D.
Helen Thomson

NEVADA OFFICE

**J. B. Deisher, M.D.
Dorothy Gabbard
Frances Nielson
Merle Owen
Dallas Rychener

MONTANA OFFICE

John J. Breeden
Helen Connell
Gary Day
Esther R. Lantz, R.N.
**Sidney C. Pratt, M.D.
Linda Winchell
Nadine Woodhouse

WYOMING OFFICE

Virginia E. Black, R.N.
John Callen
Donald L. Erickson
June R. Geiger
**Claude O. Grizzle, M.D.
Eleanor Morasch
Martha Nichols

*Acting Director
**Director